

ABSTRACT

5 A method of press-working an inorganic substrate,
which method uses a vacuum press machine having an air plunger
type pressurization system and comprises bringing upper and
lower heat plates which have been heated up to a predetermined
temperature into contact with a combination set disposed
between the upper and lower heat plates after or before the
initiation of pressure reduction of a press atmosphere or under
10 a reduced pressure and then carrying out a low pressure loading
of from the initiation of pressurization to 0.05 Mpa over 10
seconds or longer and a press machine which is suitable for
the above press-working method and which can set and control
a low-pressure of 0.02 MPa or lower and comprises an air plunger
15 that works as an air damper when the upper heat plate descends.

The above machine and the method are a machine for
press-working an inorganic substrate made of a fragile and
breakable semiconductor substrate or ceramic under heat
without any special skill and a press method therefor.

20 Accordingly, bonding and holding of the semiconductor
substrate to/on a holding substrate by pressurization and
heating, laminate-formation of a ceramic substrate, and the
like, can be carried out with a high degree of reliability.